EARTHQUAKE SOUND

Sound That Will Move You.

MINIME

MINIME

MiniMe P8

User's Manual

Earthquake Sound Corporation
2727 Mc Cone Avenue, Hayward, CA 94545
www.earthquakesound.com

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Safety Instructions

1. Read Instructions — All the safety and operation instructions should be read before the Earthquake Component is operated.

2. Retain Instructions — The safety and operating instructions should be kept for future reference.

3. Heed Warnings — All warnings on the Components in these operating instructions should be followed.

4. Follow Instructions — All operating and other instructions should be followed.

5. Water and Moisture — The Component should not be used near water - for example, near a bathtub, washbowl, kitchen sink , laundry tub, in a wet basement, or near a swimming pool, etc.

6. Ventilation — The Component should be situated so that its location or position does not interfere with its proper ventilation. For example, the Component should not be situated on a bed, sofa, rug, or similar surface that may block any ventilation openings; or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through ventilation openings.

7. Heat — The Component should be situated away from heat sources such as radiator, or other devices which produce heat.

8. Power Sources — The Component should be connected to a power supply only of the type described in these operation instructions or as marked on the Component.

9. Power Cord Protection — Power-supply cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit the Component.

10. Cleaning — The Components should be cleaned only as recommended in this manual.

11. Non-use Periods — The power cord of the Component should be unplugged from the outlet when unused for a long period of time.

12. Object and Liquid Entry — Care should be taken so that objects do not fall into and liquids are not spilled inside of the Component.

13. Damage Requiring Service — The Component should be served only by EQ qualified serviced personnel when:

a. The power-supply cord or the plug has been damaged; or

b. Objects have fallen, or liquid has spilled into the Component; or

c. The Component has been exposed to rain; or

d. The Component does not appear to operate normally or exhibits a marked change in performance; or

e. The Component has been dropped, or its cabinet damaged.

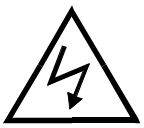
14. Servicing — The user should not attempt to service the Component beyond those means described in this operating manual. All other servicing should be referred to qualified Earthquake service personnel.

15. To Prevent Electric Shock — Do not use this polarized plug with an extension cord, receptacles of other outlet unless the blades can be fully inserted to prevent blade exposure.

16. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of the Component is not defeated.

This apparatus does not exceed the Class A/Class B (which ever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The lightening flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to a person.

WARNING: The MiniMe subwoofers are capable of generating high sound pressure levels. You should exercise caution when operating these speakers. Long term exposures to high levels of sound pressure will cause permanent damage to your hearing. Sound pressure levels exceeding 85dB can be dangerous with constant exposure, set your audio system to a comfortable loudness level. Earthquake Sound Corporation does not assume liability for damages resulting from the direct use of the MiniMe subwoofers , and urges users to play volume at moderate levels.

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To find out more about this and other fine Earthquake products, please visit our website:
www.earthquakesound.com

Introduction

Dear Valued Customer,

Welcome to the eclectic world of Earthquake High Fidelity sound systems; you are about to experience the MiniMe subwoofer. This system is designed to dramatically enhance your enjoyment of music and films at home, by adding power and impact to low frequency sound effects, without taking up your entire living space.

Earthquake Sound Corporation is located in the heart of the Silicon Valley. It specializes in manufacturing high end Home and Mobile audio products ranging from the smallest driver to the loudest subwoofer systems. In its dedication to excellence, Earthquake has maintained extensive programs in research and development to provide you with the highest quality audio products made.

This owners manual is designed to better acquaint you with the MiniMe subwoofer system, and to guide you through the phases of system design and application. It is imperative that you read this manual in its entirety. EARTHQUAKE technicians and staff are looking forward to answer any questions you might have, please call (1-800-576-7944).

Unpacking

Your Earthquake subwoofer should reach you in perfect condition. If you do notice any shipping damage, please contact your Earthquake dealer immediately.

Gently lift out the unit and remove all the packing material. It is important. It is important to save all the packing materials and the box in case your subwoofer ever needs to be moved or shipped for repair.

Make sure that you keep your sales receipt. It s the only way to establish the duration of you Limited Warranty and it may be useful for insurance purposes.

Please take a moment to fill out and mail the Earthquake Warranty Registration card. Also read the serial number located on the control panel and record it here:

Serial Number: _____

Purchased From: _____

_____

Date: _____

Features

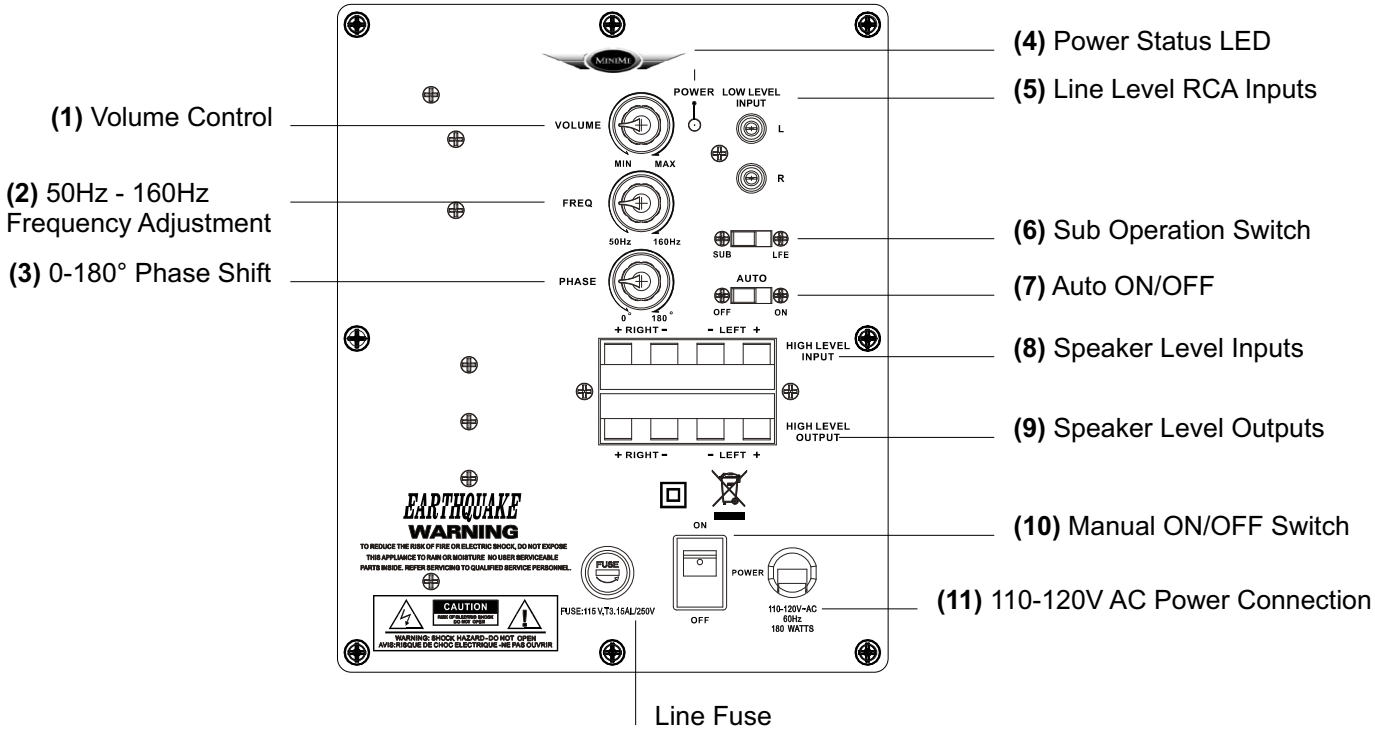
- Built in 320-Watt, high efficiency amplifier
- Extremely low distortion
- Long throw, premium quality drivers
- Convenient compact size
- Automatic signal-sensing turn-on and stand-by mode
- Volume control
- Operation status LEDs
- 50Hz - 160Hz Freq. adjustment
- 0 - 180 Phase Shift adjustment
- High Level inputs
- Bypassed High Level outputs

Care

To maintain the speaker cabinet's finish, first unplug the power cord and then use a soft, slightly dampened cloth to clean the surfaces and finish off with a dry cloth.

To keep the large rubber surrounds soft and supple for 20-years or more, treat them with mink oil, available ta most shoe repair stores. Rub a generous amount into the surrounds with a soft cloth about once a year (more often if you line in a dry climate).

Control Panel Overview



(1) Volume Control

Manual volume control to regulate your subwoofers power output, to prevent clipping and distortions caused by overpowering.

(2) 50Hz - 160Hz Frequency Adjustment

This controls the high frequency cutoff point. With the control set to the middle, the subwoofer will reproduce frequencies up to 105Hz. If the control is set fully clockwise, the crossover is bypassed and the subwoofer will reproduce a wide frequency range. With the control fully counter-closkcwise the subwoofer reproduces a narrow range, up to 50Hz.

Rotate the control until the bass sound natural. If the mid-bass sounds natural but you want more low bass, turn the control down a little.

(3) 0-180° Phase Shift

This control is used to acoustically match the subwoofer's output to your main speakers. Select the position, either 0° or 180°, in which your subwoofer has more output at the listening position.

(4) Power Status LED

Earthquake powered subwoofers have an LED on the panel that indicates the status of the built-in amplifier.

The LED will light red when the amplifier is in standby mode and green when the amplifier is on and receiving a signal.

(5) Line Level RCA Inputs

Connect with RCA type patch cords to the line level output of your receiver or pre-amp.

If your pre-amplifier or receiver has a single sub/LFE output, connect it to the subwoofer's left input jack.

There is no need to use the subwoofers right input jack. If you want to run your main/satellite speakers full range, use a "Y" adapter at the pre-amplifier outputs.

In this way, you can send the pre-amplifier's output signal to your main amplifier and to the subwoofer at the same time.

(6) Sub Operation Switch

In LFE position, the Frequency adjustment becomes disabled and the subwoofer runs in a Full range mode, from 20Hz - 2kHz.

While in Sub position the subwoofer reverts to the manual frequency adjustment, allowing the user to operate and fine tune the subwoofer to their personal taste.

(7) Auto ON/OFF

When the main “POWER” ON/OFF switch is in the “OFF” position, this switch has no affect on the subwoofer. When the main “POWER ON/OFF” switch is in the “ON” position, this switch allows the auto circuit to be engaged. When this switch is in the “AUTO” position, the subwoofer will automatically turn “on” when it senses a signal. It will automatically turn “off” after 20 minutes with no signal. When this switch is in the “ON” position, the subwoofer will remain “on” as long as the “POWER” ON/OFF switch is in the “ON” position.

(8) High Level Inputs

Under normal conditions, the preferred connection is through the Line Level inputs. If this is difficult or not possible in your system, then you can use the Speaker Level inputs. Also, if you experience excessive noise or hum with the Line Level input, often a simple change to the Speaker Level input will result in a lower background noise level.

Connect the Speaker Level inputs to the speaker-level outputs of your amplifier or receiver using speaker wire. The binding posts can accept bare wire connections only.

(9) High Level Outputs

High Level: Connecting the Subwoofer using the high level speaker connections: On the rear of your MiniMe Subwoofer are two pairs of red and black binding posts. One set is marked “Input” and one set is marked “Output”, with each pair designated as left or right. Each post is color-coded black/red. These terminals will accept up to 16-gauge quality speaker wire. The Inputs should be connected to the left and right speaker terminals of your amplifier or receiver. The Outputs should run from the subwoofer to the left and right satellite speakers. Remember: Always connect red-to-red and black-to-black, when making connections between an amplifier/receiver to the subwoofer. If you inadvertently reverse one of the connections (i.e., red-to-black), you will notice a lack of bass from your subwoofer.

(10) Manual ON/OFF Switch

In the “ON” position, the subwoofer will remain “on” constantly or can turn “on” and “off” automatically when the “AUTO/ON” circuit is engaged. In the “OFF” position, the subwoofer will remain off until the switch is manually turned back to the “ON” position.

(11) 110-120V AC Power Connection

The Earthquake MiniMe is equipped with a built in standard, two-prong power connection.

(12) Line Fuse

The subwoofer is supplied with a conservative, slow-blow type fuse to protect the electronics.

Always unplug the power cord before inspecting or changing the fuse. Never use a fuse with a larger current rating than recommended.

Installation

Observe the following general precautions and read the safety instructions before powering your Earthquake subwoofer.

• Never open the cabinet or remove the metal control panel as this might result in an electrical shock to you, or damage to the unit.

• Protect it from prolonged exposure to direct sunlight and other direct sources of heat, such as heating vents and radiators.

• To prevent fire or shock, do not expose the unit to rain or moisture. If fluid or a foreign object should enter the unit, immediately turn off the power contact your Earthquake dealer.

• Avoid excessive exposure to extreme cold or dust.

• Do not place heavy objects on top of the unit.

• Do not place the subwoofer with its control panel against the floor.

• If you wish to place your woofer so the drivers face the floor and ceiling, thereby moving up and down, use at least 1-1 ½ inch high spikes or feet for support. They may be attached either with screws or self-stick backing . This arrangement will impart substantial house and floor shaking motion.

Heat Rise

• Allow adequate ventilation around the metal control panel of the subwoofer.

• Do not let anything come into contact with the panel and keep at least two inches away from any walls.

The metal control plate serves as the amplifier heat sink and also as a conduit to remove internal heat to the outside and into the atmosphere. It can reach temperatures of 60° C, which will feel hot to the touch, using nerves of flesh and blood as temperature sensors. As uncomfortable as it may feel, 60 degrees C cannot burn you, and in fact is almost cool to copper, silicon, steel, and aluminum the material from which your woofer is constructed.

AC Power Considerations

Ensure that the unit is plugged into an outlet capable of supplying the correct voltage specified for your model.

Unplug your subwoofer's power cord from the electrical outlet if it will be left unused for a long period of time.

Route the power-supply cord so it is not likely to be walked on or pinched by especially at plugs, convenience receptacles, and the point where it exits from the unit.

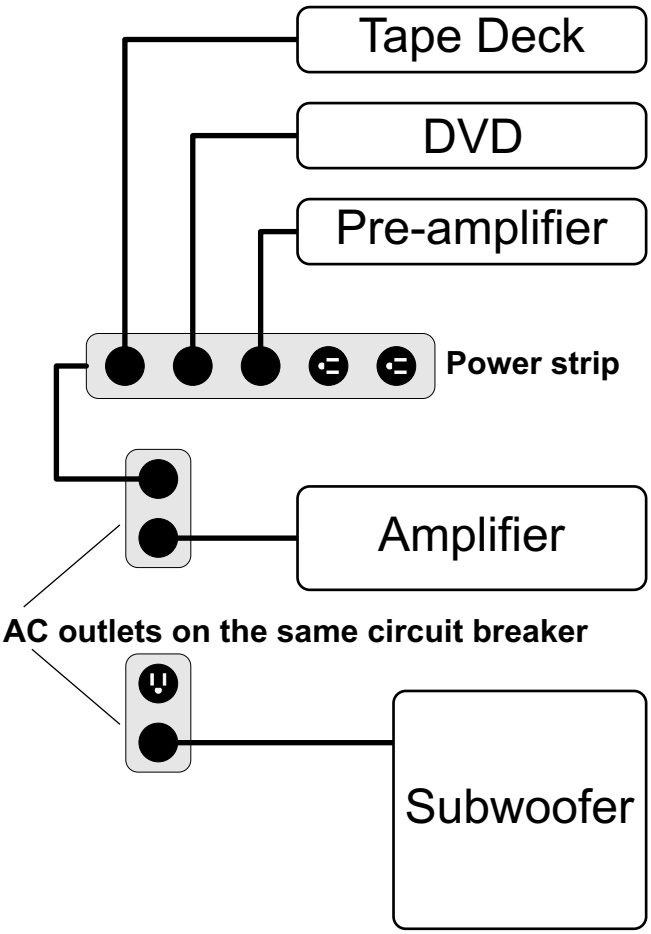
Magnetic Fields

We recommend that you place your woofer further than two feet away from your TV, VCR, DVD player, tape deck or computer, so the speaker's magnet won't distort the color of you TV picture or erase your video tapes, audio tapes, discs...etc.

Connections

Please consider the following when setting up your new system:

• Before making or changing any connections, ALWAYS make sure that the subwoofer is unplugged from the wall and your other components are turned OFF. Also, turn down the volume control of the subwoofer and your pre-amplifier or receiver.



• This diagram shows all the low power components sharing a power strip which is connected to the same outlet used by the amplifier.

• The subwoofer is connected to an outlet on the same circuit breaker, provided that the total system current draw does not exceed the breaker current rating.

• This arrangement will reduce the possibility of an audible hum in your system caused by a ground loop.

• Whenever possible, keep the power cords away from the signal cable or speaker wires to prevent any hum or inference being heard in speakers.

• Choose reliable, high quality interconnect cables, also called patch cords or RCA cables. They should be fully shielded and as short as possible for the job. The longest cable in your system will likely be to the subwoofer, so choose a good quality brand.

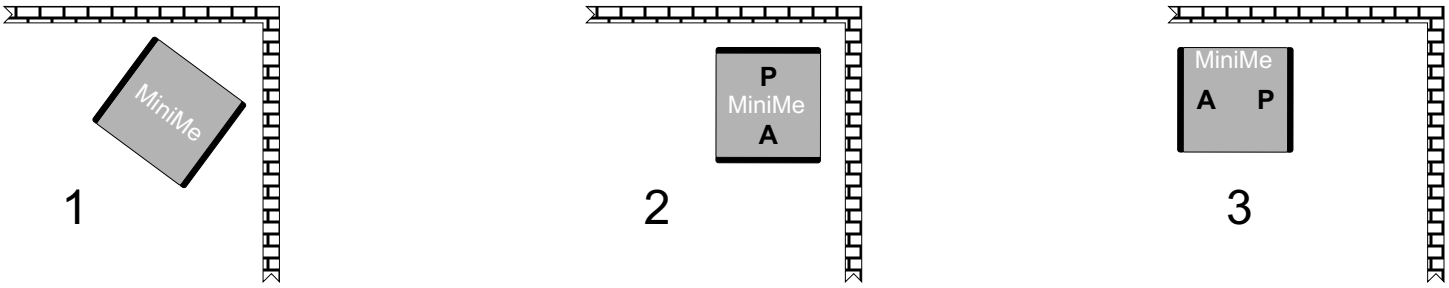
• Some patch cords can be a very tight fit and there is usually a preferred method of getting them off. Some have to be re=moved with a twisting action. Be gentle or you may damage the jacks of the subwoofer or your other components.

Speaker Level Connections

• The subwoofer's Speaker Level Inputs can accept speaker stripped speaker wires only.

• Make sure that the negative speaker wires never touch the positive wires as this will short out and possibly damage your amplifier or receiver.

Location



P= Passive Radiator A= Active Driver

Fact: Subwoofers reproduce frequencies with wavelengths that are long in relation to the dimensions of most living rooms. Standing waves will boost or cancel various frequencies due to the interaction with the room boundaries. Moving a subwoofer in a room will change what you hear in the listening position a lot.

For maximum bass reinforcement, the MiniMe subwoofer system should be placed in the corner of your living room, with the subwoofers facing the wall. This creates acoustical coupling with the walls, which in turn leads to a 9 decibels of boost in the overall response of the MiniMe. Keep a 3" clearance between the subwoofer and the walls.

Fine tuning the MiniMe requires adjustments to the crossover point, volume control and the phase switch. These controls are located on the side of the enclosure. For ease of tuning we recommend that you turn the MiniMe around to expose the controls, and place it in position (corner). Set your stereo system to a moderate listening level and adjust the MiniMe accordingly. The MiniMe is equipped with a 24 dB / Oct. Low pass filter designed to eliminate vocals from entering the system. When tweaking, gradually reduce the crossover point setting to eliminate vocals from seeping into the amplifier.

Your Earthquake MiniMe is designed to be placed in a corner and this will produce optimum performance. Experiment with at least two corners then decide which is the best.

#1 is very good positioning.

#2 is also excellent but may shake the back wall too much and cause things on or along the walls to rattle too much. If this occurs, use the #3 position.

#3 Move the woofer approximately three feet away from the right wall and place it along the back wall as shown. This will substantially reduce the rattling of the back wall and will still pressurize the room with lots of bass.

Although low frequencies are non directional, factors such as room reflections, standing waves, resonance, and absorption strongly affect your subwoofer's performance.

Also position the control panel so that it is not touching anything and can receive good ventilation.

Using Two Subwoofers

If you choose the use two woofers, the sound output will double (an increase of 5dB). Locate the woofers with one in each corner and experiment with the location and phase control to achieve the best bass response.

Always drive each woofer through the Left/Mon input even though you are driving one woofer on a right channel drive and the other with a left channel drive. If your pre-amplifier has a single dub/LFE output, use a 'Y' cable to split it into two outputs.

Remember to keep it at least two or three feet away from any TV screen, computer, VCR or magnetic tapes and discs. This will reduce the chance of the magnetic field upsetting the TV screen or erasing your magnetic media.

System Configurations

The following pages show some typical connections that you might make in your installation. They show how the inputs and outputs of the Earthquake sub are connected to your pre-amplifier or receiver.

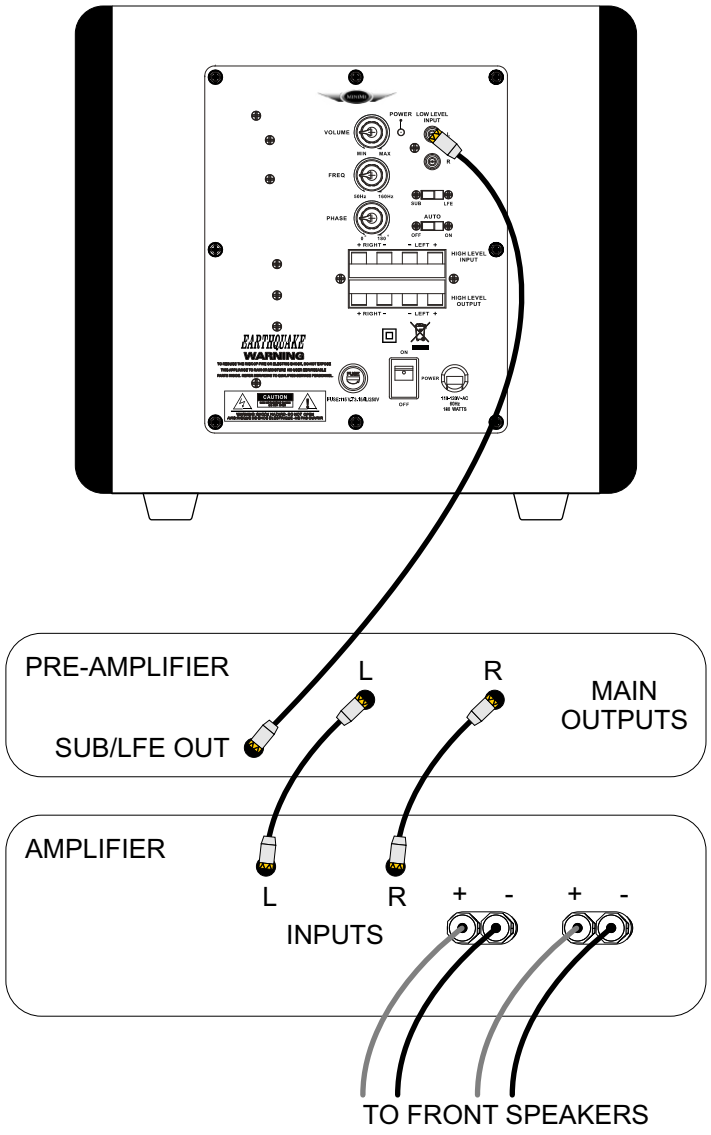
Connections to a pre-amplifier's subwoofer output

If your pre-amplifier has a subwoofer output (often labeled LFE for Low Frequency Effects), it can be connected to the subwoofer's Left (Mono) input as shown. This is the simplest and recommended connection. A receiver with a sub/LFE output can be connected in the same way.

The subwoofer will play the low frequency range and the other speaker will play the frequency range delivered to them by your amplifier.

If you have a home theater pre-amplifier, it may have an independent subwoofer volume control. Make sure this is correctly adjusted, and that the Earthquake subwoofer's crossover frequency is set to 100Hz. This is by no means an iron-clad rule, rather it is a good starting point.

You can set the subwoofer's Bass Level control on your receiver to 0dB, and then use the pre-amplifier's subwoofer level control for normal and routine adjustments.



Connections to a pre-amplifier using “Y” cables

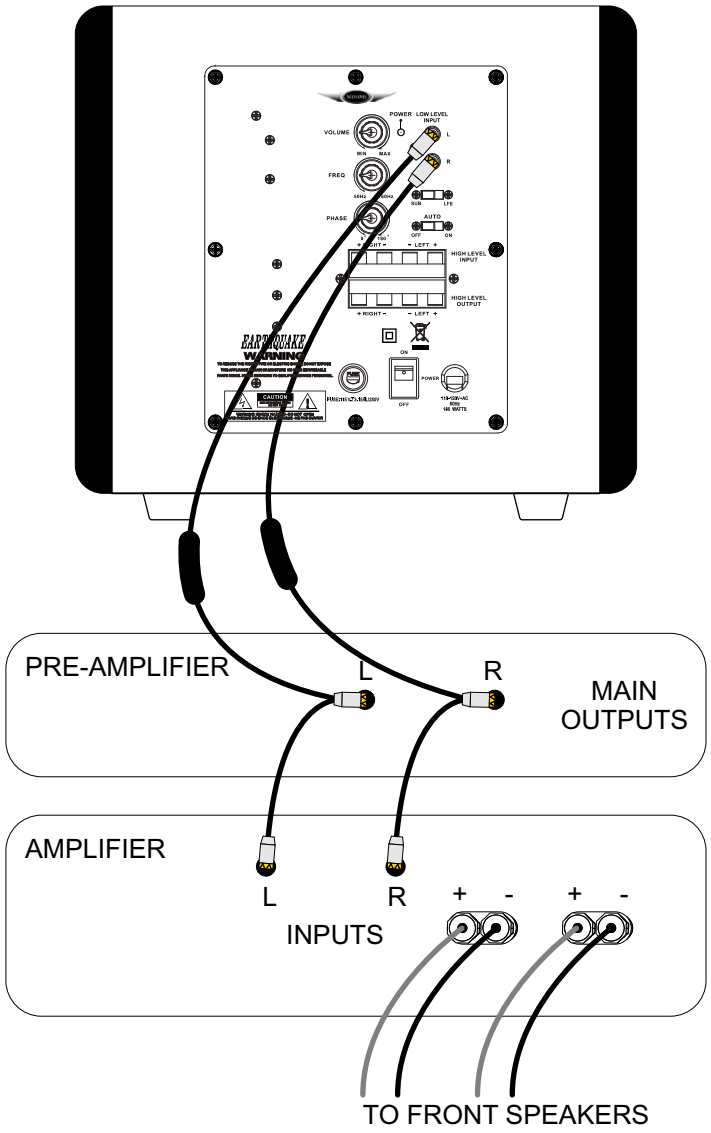
If your pre-amplifier does not have a sub/LFE output, you can use “Y” cables to send its main outputs to both the subwoofer and your amplifier.

The subwoofer will play the low frequency range and your front speakers will play the full range.

Although bass is commonly distributed evenly between left and right channels (L+R bass), movie soundtracks often contain differential (L-R) bass. The opening scene in “Top Gun”, for example, has loads of L-R bass information. If this is not preserved, the bass in these scenes sounds anemic. The Earthquake subwoofer utilized differential gain on the left and right inputs to retain both the L+R and L-R information. Therefore, systems which do not have a dedicated sub/LFE output should use both the left and the right inputs as shown, for the greatest bass impact.

An Alternative connection method without using “Y” cables is shown on the next page.

If your pre-amp/receiver has a dedicated sub/LFE output, the only the Left (Mono) input is used, as shown on the previous page.



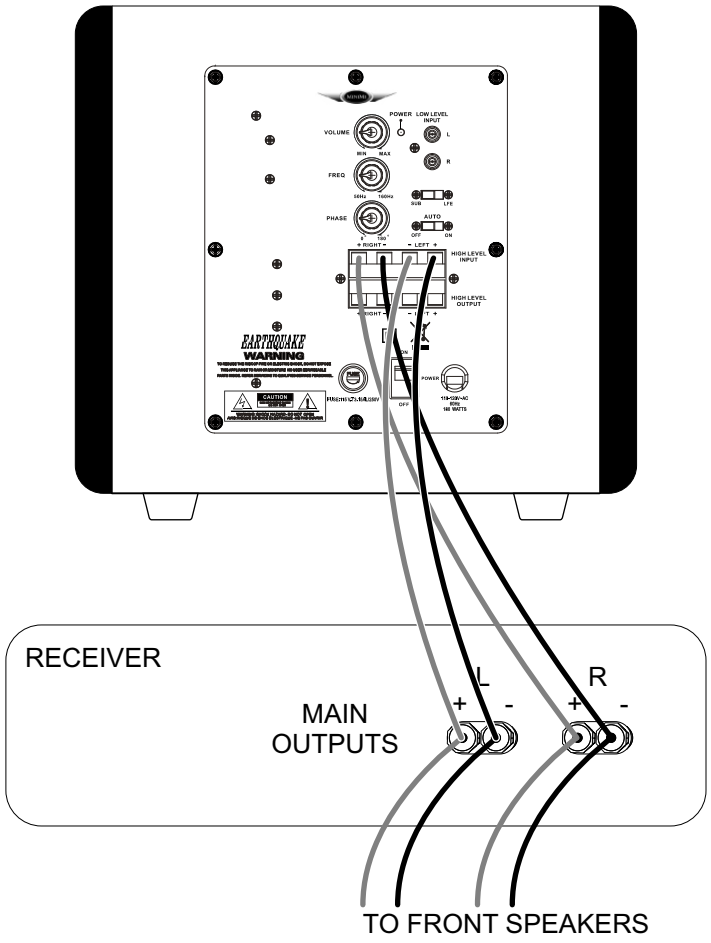
Using the line speaker-level inputs

If you are using a receiver which does not have a subwoofer output or line level outputs (pre-outs), you can connect its speaker outputs to the subwoofer's Speaker-Level inputs. The front speakers can still be connected to your receiver.

The subwoofer's internal amplifier supplies the power to reproduce the low frequency range. It receives a sample of the signal going to your front speakers. (An insignificant fraction of your receiver's power is transferred to the subwoofer).

There is no need to use the Speaker Level inputs if you are using a separate amplifier and pre-amplifier. Such systems are best connected using the Line Level Inputs as shown in the previous diagrams.

If you are using the Line Level inputs and there is an excessive amount of noise or hum present, using the Speaker Level inputs may yield a lower background noise level.



Adjusting the controls

There are two main methods for adjusting the level, crossover frequency and phase of the Earthquake MiniMe to match a system.

- Method One: Typical: Listening and making adjustments to suit your taste.
- Method Two: Laboratory: By measuring the output and adjusting for a flat frequency response.

Satisfactory results can be achieved if you make the adjustments based on simply listening. This is Earthquake's preferred method as it allows the system to be voiced based on what sounds the best, whereas laboratory-flat frequency response can often be clinical and less than exciting.

The following procedure is for those who prefer a more methodical and scientific approach.

You will need a test CD with low-frequency warble tones, and a sound pressure-level meter.

Step #1
Disconnect the subwoofer and run the main speaker with a tone in its passband (80-100Hz). Measure the level.

Step #2
Disconnect the main speaker and reconnect the subwoofer. Set the subwoofer to its highest crossover frequency. Set the level control of the subwoofer to give the same sound pressure level with the same tone you used in Step #1.

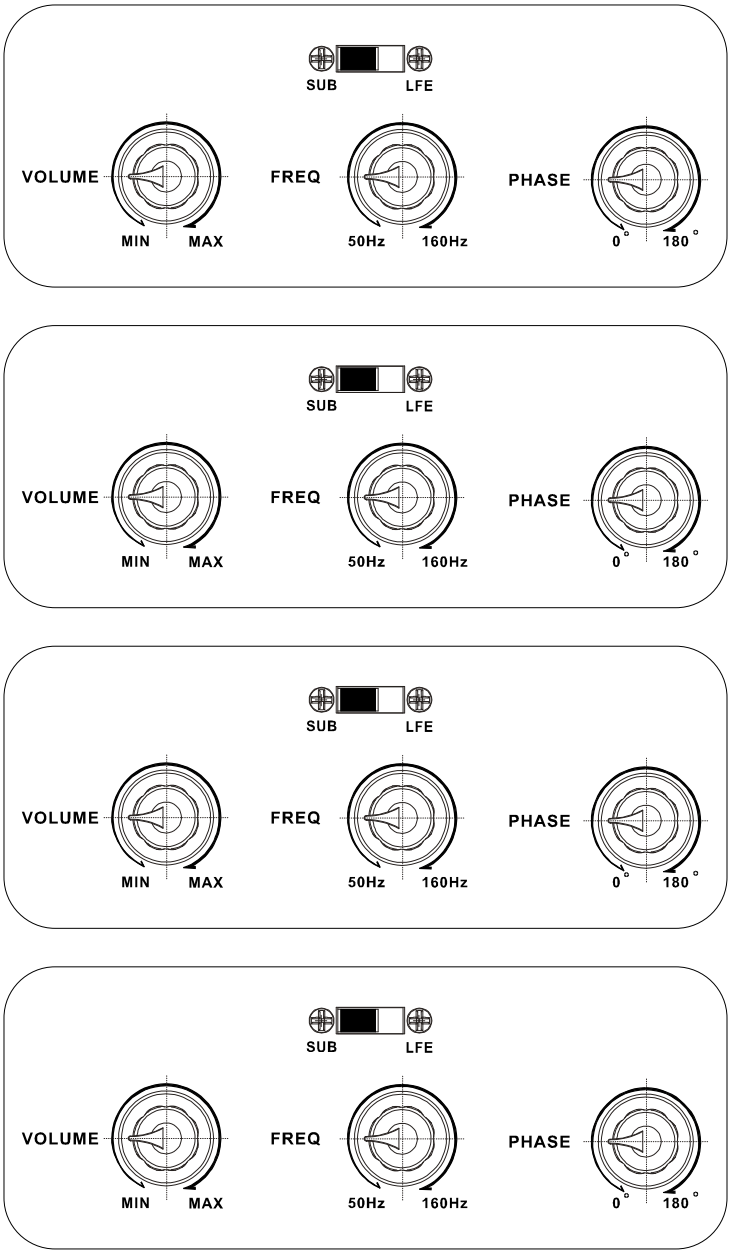
Step #3
With both the subwoofer and the main speaker connected, measure the level of the tones at the available frequencies. Because the crossover is set too high, you will have a peaked response. Adjust the crossover control to get the smoothest response.

Step #4
Use the phase control to make the response even smoother. It has its biggest effect at the crossover frequency. You can iterate between the crossover and the phases controls. Keep your hands off the level control! It was set correctly in Step #2.

Step #5
Listen to the subwoofer. Resist all temptation to turn up the level control. Play something with really deep bass to confirm that your subwoofer is working.

Control settings

Use the following charts to record more desirable data from test results.



Specification

Amplifier Output
160 Watts RMS (4.6-Ohm impedance)

High Cut Filter
35Hz 100Hz adjustable. The crossover can be bypassed by rotating the crossover frequency control fully clockwise.

Frequency Response
28Hz 175Hz

Power Line Voltage
110-120C~AC / 60Hz / 180 WATTS

Dimensions (HxWxD)
10.375” / 260.35mm (including legs)
10.4375” / 265.1125mm (including amplifier controls)
11.625” / 295.275mm (grille-to-grille)

Weight
10Lbs

Finish
Piano Black

Output Levels
Greater than 108dB peak SPL (includes room gain) from 25Hz to 90Hz.

Input Sensitivity For Full Output
240mVrms from left input with volume control at 0dB, 90mVrms with volume control fully clockwise.

Input Impedance
8.2 kilo-Ohm Line-level inputs
32-Ohm Speaker-level inputs

Driver
8” high-power with extra large magnet and long throw mechanical design yield very high back emf. The result is extraordinarily high operating efficiency that is, more acoustic output for each watt of input.

Internal System Gain
42dB from left input jack to speaker with the Bass Level control at 0dB, 54dB with the control fully clockwise.

Limited 5-Year Warranty

Earthquake warrants the original purchaser that all Factory Sealed New Audio Products to be free from defects in material and workmanship under normal and proper use for a period of five (5) years from the date of purchase (as shown on the original bill of sale with serial number affixed/written on it). The five (5) year warranty period is valid only if an authorized Earthquake dealer properly installs the product and the warranty registration card is properly filled out and sent to Earthquake Sound Corporation. If a non-authorized party installs the product, a ninety (90) day warranty period will be applied.

(A) Five (5) years limited warranty plan coverage guidelines:

- **First year:** Earthquake pays for labor, parts, and ground freight (only in US mainland, not including Alaska and Hawaii. Shipping to us is not covered).
- **Second year:** Earthquake pays for labor and parts only, customer must pay freight both ways.
- **Third, fourth & fifth year:** Earthquake pays labor only. Customer must pay for parts and freight both ways.

(B) Warning:

Products (sent for repair) that are tested by Earthquake technicians and deemed to have no problem(s) will not be covered by the five (5) year limited warranty. Customer will be charged a minimum of one (1) hour of labor (at the ongoing rates) plus shipping charges back to customer.

(C) Earthquake will repair or replace at our option all defective products/parts subject to the following provisions:

- Defective products/parts have not been altered or repaired by other than an Earthquake factory-approved technicians.
- Products/parts are not subjected to negligence, misuse, improper use or accident, damaged by improper line voltage, used with incompatible products or have its serial number or any part of it altered, defaced or removed, or have been used in any way that is contrary to Earthquake's written instructions.

(D) Warranty Limitations:

Warranty does not cover products that have been modified or abused, including but not limited to the following:

- Damages to speaker cabinet and cabinet finish due to misuse, abuse or improper use of cleaning materials/methods.
- Bent speaker frame, broken speaker connectors, holes in speaker cone, surround & dust cap, burnt speaker voice coil.
- Fading and/or deterioration of speaker components & finish due to improper exposure to elements.
- Bent amplifier casing, damaged finish on the casing due to abuse, misuse or improper use of cleaning material.
- Burnt tracers on PCB.
- Product/part damaged due to poor packaging or abusive shipping conditions.
- Subsequent damage to other products.

A warranty claim will not be valid if the warranty registration card is not properly filled & returned to Earthquake with a copy of the sales invoice. Warranty card is located on the last page of this manual.

(E) Service Request:

To receive product service, contact Earthquake Service Department at (510) 732-1000 and request an RMA number (Return Material Authorization). Items shipped without a valid RMA number will be refused. Make sure you provide us with your complete/correct shipping address, a valid phone number, and a brief description of the problem you are experiencing with the product. In most cases, our technicians might be able to resolve the problem over the phone; Thus, eliminating the need to ship the product.

(F) Shipping Instructions:

Product(s) must be packaged in its original protective box(es) to minimize transport damage and prevent repackaging cost (at the ongoing rates). Shipper claims regarding items damaged in transit must be presented to carrier. Earthquake Sound Corporation reserves the right to refuse improperly packed product. Original bill of sale must accompany product returned to service. We encourage you to include with the package a written description of the problem. Ship product to: Earthquake Sound Corp. 2727 McCone Avenue, Hayward, CA 94545. Ph: (510) 732-1000. You are responsible for the cost of shipping the product to Earthquake Sound Corporation.

(G) Disputes Resolution:

All disputes between clients and Earthquake Sound Corporation resulting from the five (5) year limited warranty policy must be resolved according to the laws & registration of the county of Alameda California.

PRODUCT REGISTRATION

This Earthquake MiniMe can be registered by returning the Product Registration card attached to this manual or by visiting www.earthquakesound.com/ProductRegistration. Please also retain the bill of sale, which represents proof of purchase and helps expedite warranty issues.

Earthquake Sound Corporation.
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